This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-42 (Cancelled)

43. (New) A DC to AC inverter circuit, comprising:

an input voltage source;

a plurality of switches being selectively coupled to said voltage source;

a transformer having a primary side and a secondary side, said primary side being selectively coupled to said voltage source in an alternating fashion through said switches;

a load coupled to said secondary side of said transformer; and

a feedback control loop circuit receiving a feedback signal indicative of power being supplied to the load and adapted to control the conduction state of one of said switches so that said switches have overlapping conduction states, said overlapping conduction states comprise a first state in which said switches overlap to deliver an amount of power to said load determined by said feedback signal, and a second state in which said switches have a predetermined minimum overlap to deliver a predetermined minimum power to the load.

44. (New) An inverter circuit as claimed in claim 43, said feedback control loop circuit comprises an error amplifier comparing said feedback signal to a predetermined reference signal and generating an error signal indicative of the difference between said feedback signal and said predetermined reference signal; a flow-through switch coupled to said error amplifier and having a first conduction state wherein the output of said switch comprises a DC signal indicative of said first state of said overlapping switches, and a second conduction state wherein the output of said switch comprises a DC signal indicative of said second state of said overlapping switches.

45. (New) An inverter circuit as claimed in claim 44, further comprising protection circuitry comprising a current sense comparator, said current sense comparator comparing said feedback signal to a second reference signal; wherein if the compared value of said feedback signal and said second reference signal is within a predetermined range said current sense comparator generates a first control signal to control the conduction state of said switch corresponding to said first overlapping conduction state; and wherein if the compared value of said feedback signal is outside a predetermined range said current sense comparator generates a second control signal to control the conduction state of said switch corresponding to said second overlapping conduction state.

46. (New) An inverter circuit as claimed in claim 43, further comprising a sense resistor coupled between said load and said secondary side of said transformer, said sense resistor generating said feedback signal.

47. (New) An inverter circuit as claimed in claim 45, said protection circuitry further comprising an overvoltage protection circuit comprising a voltage comparator comparing a predetermined voltage reference to a voltage signal indicative of load voltage conditions and generating a voltage control signal.

48. (New) An inverter as claimed in claim 44, wherein said reference signal represents desired load conditions.

49. (New) An inverter as claimed in claim 45, wherein said second reference signal represents the minimum or maximum current permitted by said switches and/or said load.

50. (New) An inverter as claimed in claim 47, wherein said voltage control signal represents the maximum voltage at said secondary side of said transformer

51. (New) An inverter circuit for converting a DC voltage source to and AC voltage source to power a load, comprising:

a plurality of switches being selectively coupled to said DC voltage source; and

a feedback control loop circuit receiving a feedback signal indicative of power being supplied to said load and adapted to control the conduction state of at least one of said switches so that said switches have overlapping conduction states, said overlapping conduction states comprise a first state in which said switches overlap to deliver an amount of power to said load determined by said feedback signal when said feedback signal is greater than a predetermined threshold.

52. (New) An inverter circuit as claimed in claim 51, wherein said overlapping conduction states of said switches further comprises a second state in which said switches have a predetermined minimum overlap to deliver a predetermined minimum power to the load.

53. (New) An inverter circuit as claimed in claim 51, wherein the amount of overlap between said switches determines the amount of power delivered to said load.

54. (New) An inverter circuit as claimed in claim 52, wherein said second state occurs if said feedback signal is below said predetermined threshold.

55. (New) A DC to AC inverter circuit comprising:

a plurality of switches being controlled in an alternating fashion; and

a feedback control loop circuit receiving a feedback signal indicative of power being supplied to a load and adapted to control the conduction state of at least one of said switches so that said switches have overlapping conduction states, said overlapping conduction states comprise a first state in which said switches have a predetermined minimum overlap to deliver a predetermined minimum power to the load.

56. (New) An inverter circuit comprising:

a plurality of switches being controlled in an alternating fashion; and

a feedback control loop circuit receiving a feedback signal indicative of power being supplied to a load and adapted to control the conduction state of at least one of said switches so that said switches have overlapping conduction states, said overlapping conduction states comprise a first state in which said switches overlap to deliver an amount of power to said load determined by said feedback signal when said feedback signal is greater than a predetermined threshold; and a second state in which said switches have a predetermined minimum overlap to deliver a predetermined minimum power to the load.